

0012370

SINGLE-SHELL TANK WASTE CHARACTERIZATION FOR TANK 241-U-110 CORE 8

DATA PACKAGE

SECTION

7 OF 7



Westinghouse
Hanford Company

012370

7 of 7

OSH RCRA LEVEL C DATA ASSESSMENT

DATE 12-110-90 SAMPLES/MATRIX _____
(Conque J. Simiele)
REVIEWED BY C.J. Simiele _____
LABORATORY WHC 222-S _____
CASE # BST-241-U-110 _____
SDG # 89-053 _____
Core 8 Seq.4

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS			
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____

0 = data had no problems

X = data qualified due to minor problems

M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSMENT: Sampler was empty.

NOTES: _____

o Refer to the corresponding attachments for explanation of any problems.



Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

222-S/RCRA ANALYTICAL LABORATORIES

PROJECT: SINGLE-SHELL TANK WASTE
CHARACTERIZATION

TANK: 241-U-110

CORE: 8

SEGMENT: 4

CUSTOMER ID. NUMBER: 89-053

REPORT REVISION: 1

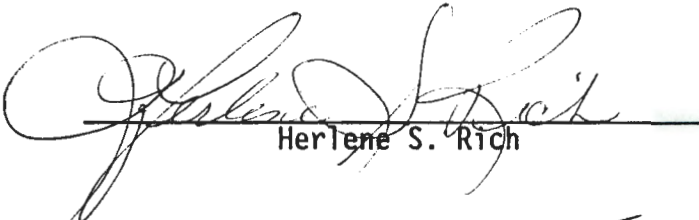
DATE PRINTED: JUNE 19, 1990



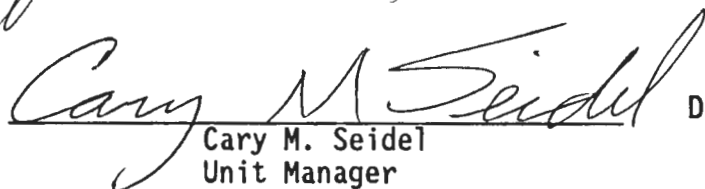
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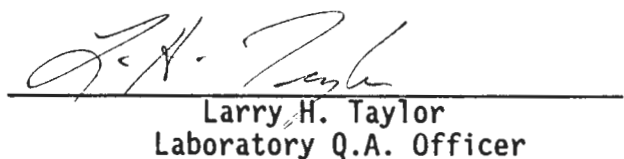
I have reviewed this report and certify that the package is in compliance with SD-CP-QAPP-002. I found it to be a true and accurate accounting both technically and for completeness of the laboratory analyses performed on this sample.


Herlene S. Rich

Date 06-21-90


Cary M. Seidel
Unit Manager

Date 6-21-90


Larry H. Taylor
Laboratory Q.A. Officer

Date 7-10-90

INTRODUCTION

INTRODUCTION

Westinghouse Hanford Company 222-S/RCRA Analytical Laboratories are supporting the characterization efforts of the single shell tanks. The characterization of tank 241-U-110 was performed under Phase 1A and 1B of the Waste Characterization Plan for the Hanford Site Single-Shelled Tanks (WHC-EP-0210).

Tank 241-U-110 has a 500,000 gallon capacity, construction was completed in 1944. The tank received first cycle waste, REDOX high-level waste, coating waste, and laboratory waste until 1975. Between July 7, 1975 and February 2, 1976, P-10 pumps were installed, and 41,700 gallons of liquid waste were pumped from the tank. Tank 241-U-110 still contains an estimated 195,000 gallons of waste.

Analytical Laboratories performs all analytical analysis to the specifications of WHC-SD-CP-QAPP-002. In accordance with WHC-SD-CP-QAPP-002 the following laboratory policies are being followed. Spikes are performed on either the undissolved sample, or the sample after dissolution as directed by the chemist. If the spike addition is found to be less than 20% of an analyte concentration, the spike recovery is not reported due to errors introduced by the precision of the sample analysis. The concentration of spike additions will be re-evaluated before the start of phase 1C. Two spiking routines are being used during phase 1A and 1B. For the following analyses, Ion Chromatography, Inductively Coupled Plasma, Mercury Hydride, Total Organic Carbon, and Carbonate analyses the solid sample is spiked independently from the sample digestion. Any non-homogeneity of the sample could adversely affect the spike recoveries. For the radio-isotopic analysis and other analyses not specified above the spikes were preformed by spiking an aliquot of sample after digestion.

The laboratory does not report sample results from batch analyses that are questionable. The results from questionable batches are discarded and the analysis is repeated. Sample cards (laboratory travelers) for the repeated analysis are reissued for analysis after they have been stamped "rerun". Laboratory travelers are issued using a computerized routine according to a "sample point". This sample point label (segment-n) on the Laboratory travelers and on the GEA analysis reports has no relationship to the sampling activities or the sample identification. All results in this data package relate only to the sample identified as segment 4 from core 8 taken from tank 241-U-110.

This report is formatted into sections corresponding to the type of dissolutions performed prior to analysis. A brief summary of analytical results is reported, followed by calibration data and an analysis batch report. Any notable observations regarding an analysis are noted on the batch report for that analysis. Copies of laboratory travelers can be found in Appendix A.

SAMPLING AND CUSTODY DATA

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number S-027-89 (2) Sample Number 89-053 (3) Supervisor D. G. Hartley
 (4) Tank 110 U (5) Riser 7 (6) Segment #4 (7) Cask Serial Number 10100

Radiation Survey Data:

Over Top Dose Rate

(8) FIELD 2.5 MV/Hr (20) LABORATORY <0.5 mCi/hr

Side Dose Rate

2.5 MV/Hr <0.5 mCi/hr

Bottom Dose Rate

2.5 MV/Hr <0.5 mCi/hr

Smearable Contamination

<DET. <DET.

(alpha) (alpha)

<DET. <DET.

(beta-gamma) (beta-gamma)

RPT [Signature] RPT [Signature]

(Signature) (Signature)

(9) Shipment Description:

A. Work Package Number

2W-89-00955/W

B. Cask Seal Number

For Future Use

C. Sampler Number, Used

24

D. Date and Time Sampler Unseated

11-17-89, 1700

E. Expected Liquid Content

20%

F. Expected Solid Content

80%

G. Dose Rate Through Drill String

1 MV/Hr

H. Expected Sample Length

19"

(10) INFORMATION (Include statement of laboratory tests to be performed.*)

Core #8, WHE-EP-0210 Waste Characterization Plan for the Hanford Site Single-Shell Tanks

*Reference laboratory work request, if available.

Comments:

(11) POINT OF ORIGIN

1104
241-U

(12) SENDER NAME

D. G. Hartley
SENDER SIGNATURE [Signature]

(13) DATE AND TIME RELEASED

11-20-89
2107

(14) DESTINATION

2225
CAB 91
200 West

(16) RECIPIENT NAME

MS LAVARAS
RECIPIENT SIGNATURE [Signature]

(17) DATE AND TIME RECEIVED

11-20-89
2145

(15) Seal Intact Upon Release?

☒ Yes ☐ No

(18) Seal Intact Upon Receipt?

☒ Yes ☐ No

(19) Seal Data Consistent with this Record?

Shipment No. ☒ Yes ☐ No Sample No. ☒ Yes ☐ No

Single Shell Tank Waste Characterization Summary of Core Sample

Phase
I-A

Tank ID:	241-U-110
Riser ID:	7
Core ID:	8

Date Sampling Initiated:	11-27-89
Date Sampling Completed:	11-28-89

Segment 1	Lab Serial No.	F0289
	Customer ID. No.	89-050
	Last Segment?	NO
Segment 2	Lab Serial No.	*F0321
	Customer ID. No.	89-051
	Last Segment?	NO
Segment 3	Lab Serial No.	*F0345
	Customer ID. No.	89-052
	Last Segment?	NO
Segment 4	Lab Serial No.	*F0369
	Customer ID. No.	89-053
	Last Segment?	YES
Segment 5	Lab Serial No.	
	Customer ID. No.	
	Last Segment?	
Segment 6	Lab Serial No.	
	Customer ID. No.	
	Last Segment?	
Segment 7	Lab Serial No.	
	Customer ID. No.	
	Last Segment?	
Segment 8	Lab Serial No.	
	Customer ID. No.	
	Last Segment?	
Segment 9	Lab Serial No.	
	Customer ID. No.	
	Last Segment?	
Segment 10	Lab Serial No.	
	Customer ID. No.	
	Last Segment?	
Segment 11	Lab Serial No.	
	Customer ID. No.	
	Last Segment?	
Segment 12	Lab Serial No.	
	Customer ID. No.	
	Last Segment?	
Segment 13	Lab Serial No.	
	Customer ID. No.	
	Last Segment?	
Segment 14	Lab Serial No.	
	Customer ID. No.	
	Last Segment?	

* Notes CASK WERE RECEIVED EMPTY.

Segment 89-050 will be analyzed using the core composite schedule.

Interim

SST-1 Rev. B 3/27/90

Prepared by:

Signature

H.S. RICH.

Printed Name

Date: 6-11-90

Verified by:

Signature

C.M. SEIDEL

Printed Name

Date: 6-11-90

Approved by:

Signature

L.H. Taylor

Printed Name

Date: 7-10-90

PHYSICAL TEST RESULTS

Single Shell Tank Extrusion of Segment -- Physical Tests	Phase I-A
---	----------------------------

Lab Segment Serial No.: F0369

Customer ID: 89-053

Analyst: RICHARD L. WEISS

Date Extruded: 11-27-89

Drainable Liquid

Liquid Submitted for Segment Analysis? -- No

Gross	Tare	Net
Serial	Date/Time _____/_____/_____	Estimated
Specific	Calculated	

Appearance of Liquid:

Dimensions of Segment

Complete Segment Obtained? NO	Length: 0 IN	Calculated Volume: 0 CUBIC IN
Remarks SAMPLER WAS RECEIVED EMPTY		

Appearance of Solid:

Penetrometer

lbs/sq in	Remarks:
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Homogenization

Procedure: T038A-00712 Revision: F	Quantity of Material grams
Date Homogenized:	Time Homogenized: Minutes
Operator:	

Laboratory Notebook Reference

Notebook No.	Page No.
--------------	----------

Prepared by:

[Signature]
Signature

H. S. RICH
Printed Name

Date: 06-11-90

Verified by:

[Signature]
Signature

C.M. SEIDEL
Printed Name

Date: 06-11-90

Approved by:

[Signature]
Signature

L.H. Taylor
Printed Name

Date: 7-10-90

Interim

SST-3 Rev. C 3/27/90

APPENDIX A
ANALYTICAL CARDS

Serial No. F 369.-5000	Sample Point SEGMENT-B	Date 11-21-89	Time Issued 9: 2	Priority 1B
Determination APPR/OTR	Method/Standard LI-000-200	Result Units NONE	Charge Code WB75L	Remarks 0
Sample Size ?			Customer ID 89-053	
Remarks, Calculations, Results: A. JAR ID# B. JAR TARE WT. C. JAR TOTAL WT. D. C-B= E. EST. VOL./LENGTH F. VISUAL REMARKS <i>No Sample</i> <i>Pintle Rod still in</i> <i>sampler No Sample Possible</i>				
Analyst - 1 <i>RLW 11-27-89</i>	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs
Date	Time Completed	Lab Unit Mgr <i>[Signature]</i>		

54-6800-061 (R-10-83)

Serial No. F 345.-5000	Sample Point SEGMENT-B	Date 11-21-89	Time Issued 8:44	Priority 1B
Determination APPR/OTR	Method/Standard LI-000-200	Result Units NONE	Charge Code WB75L	Remarks 0
Sample Size ?			Customer ID 89-052	
Remarks, Calculations, Results: A. JAR ID# B. JAR TARE WT. C. JAR TOTAL WT. D. C-B= E. EST. VOL./LENGTH F. VISUAL REMARKS <i>No Sample</i> <i>Empty</i>				
Analyst - 1 <i>RLW 11-27-89</i>	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs
Date	Time Completed	Lab Unit Mgr <i>[Signature]</i>		

54-6800-061 (R-10-83)

Serial No. F 321.-5000	Sample Point SEGMENT-B	Date 11-21-89	Time Issued 8:40	Priority 1B
Determination APPR/OTR	Method/Standard LI-000-200	Result Units NONE	Charge Code WB75L	Remarks 0
Sample Size ?			Customer ID 89-051	
Remarks, Calculations, Results: A. JAR ID# B. JAR TARE WT. C. JAR TOTAL WT. D. C-B= E. EST. VOL./LENGTH F. VISUAL REMARKS <i>NO SAMPLE</i>				
Analyst - 1 <i>RLW 11-27-89</i>	Analyst - 2	Analyst - 3	Analyst - 4	Analyst - 5
Hrs	Hrs	Hrs	Hrs	Hrs
Date	Time Completed	Lab Unit Mgr <i>[Signature]</i>		

54-6800-061 (R-10-83)